

OPERATING SUMMARY

TD227  
D47  
W38  
1974  
MOE

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TOWN OF  
**DESERONTO**  
WATER POLLUTION CONTROL PLANT

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DESERONTO

WATER POLLUTION CONTROL PLANT

MINISTRY OF THE ENVIRONMENT

1974 ANNUAL OPERATING SUMMARY

prepared by

Plant Performance Unit

TECHNICAL SERVICES BRANCH

T. Cross, Director

TD227

D47

W38

1974

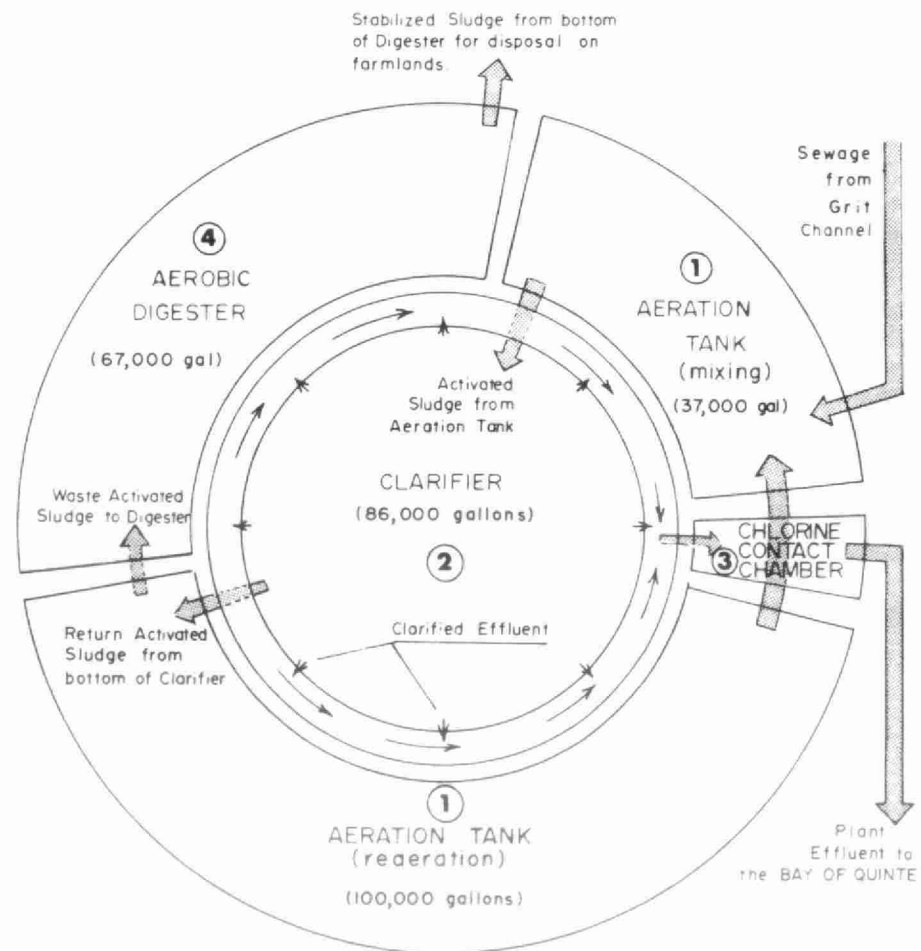
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TOWN OF  
DESERONTO  
WATER POLLUTION CONTROL PLANT



## DESIGN DATA

Project: Town of Deseronto WPCP

Project No : 1-0010-66

Design Flow: 0.3 MGD

BOD : Raw Sewage 197 mg/l  
Removal 90%

SS : Raw Sewage 224 mg/l

Population : 2800

### PUMPING STATION (at Plant)

2, Raw sewage pumps

Size: 416 IGPM at 23' TDH

### GRIT REMOVAL:

Type: 2 manually cleaned channels

Size: 1'6" x 20' x 2' swd

Volume: 786 I. Gal. Detention: 3.8 min.

### COMMINUTION:

One, type: QU250 Design: 695 IGPM

### SCREENING:

Bar screen with  $\frac{1}{4}$ " bars on 2" centres.

### BIOLOGICAL TREATMENT

(Napane Industries Plant)

(Contact Stabilization Plant converted to Extended Aeration)

### AERATION SECTION:

Volume: 37,400 I. Gal

### REARATION SECTION:

Volume: 99,800 I. Gal.

Detention (as extended aeration plt) 11 hours

### AEROBIC DIGESTER:

Volume: 67,400 I. Gal.

Airlift - Return sludge : 350 IGPM

- Waste sludge: 210 IGPM

Blowers: 3, SUTORBILT

Size: 430 SCFM at 8 psi

### SEDIMENTATION SECTION:

Volume: 86,350 I. Gal. Detention: 6.9 hours

Surface overflow rate: 330 gal/ft<sup>2</sup>/day

### CHLORINE CONTACT CHAMBER:

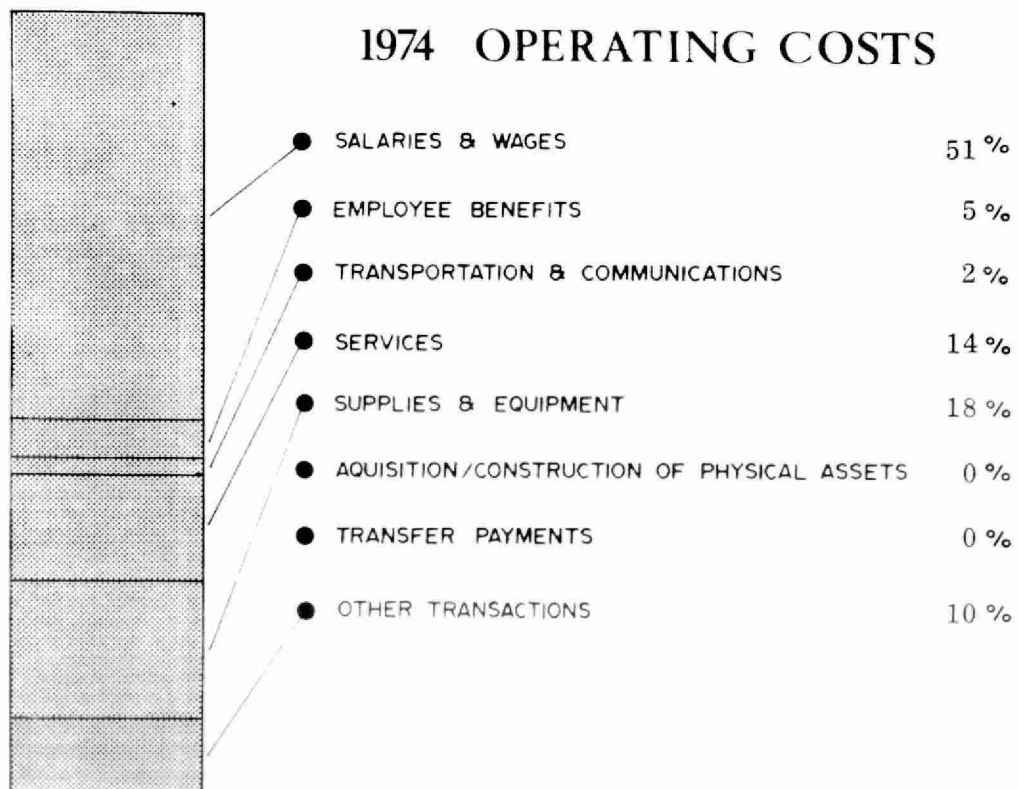
Volume 6200 I. Gal Detention: 30 min.

### OUTFALL

500' 18" dia. pipe

# ANNUAL COSTS

## 1974 OPERATING COSTS



## YEARLY OPERATING COSTS

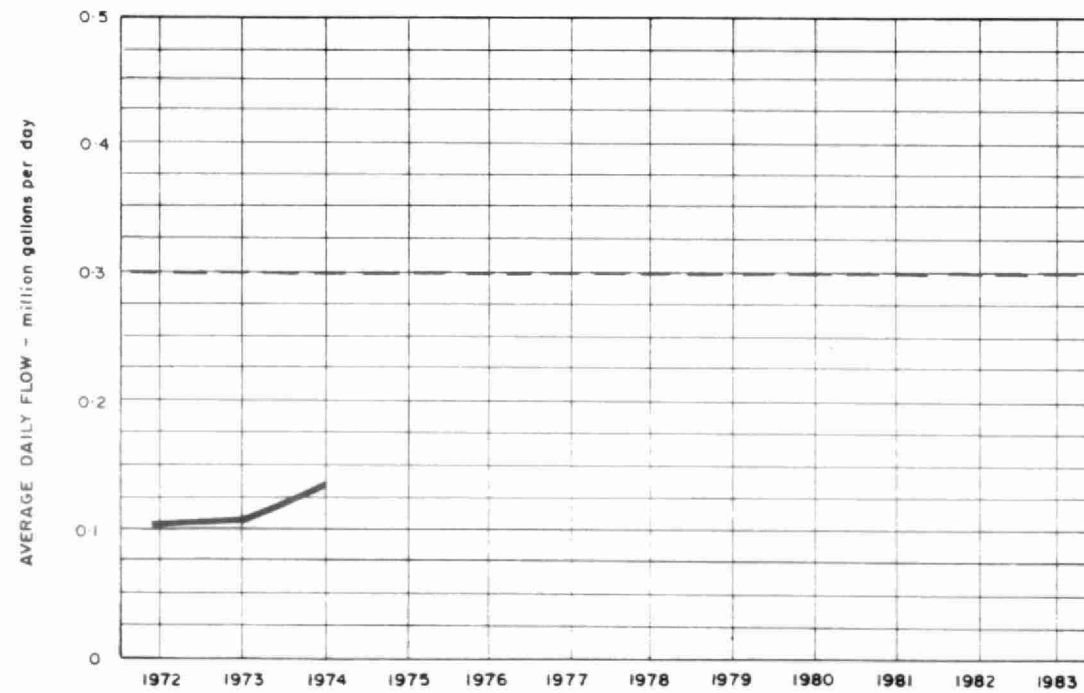
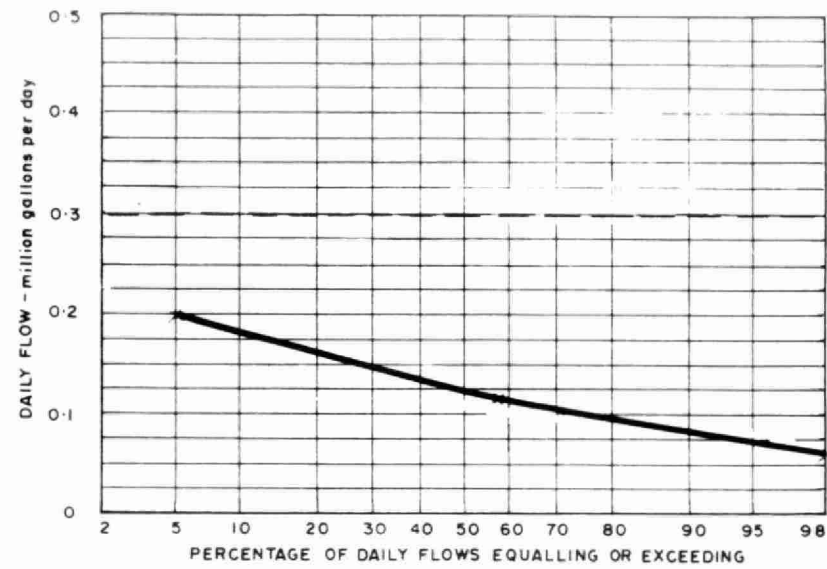
YEAR	SEWAGE TREATED in million gallons	TOTAL OPERATING COSTS	UNIT COSTS	
			\$/M.G	¢/lb BOD
1974	46	45919	992	52



# OPERATING EXPENDITURES

Regular Staff	\$ 23190	\$
Casual (Unclassified) Staff		
TOTAL SALARIES AND WAGES		23190
TOTAL EMPLOYEE BENEFITS		2404
TOTAL TRANSPORTATION AND COMMUNICATIONS		1135
Insurance	367	
Sludge Haulage	2337	
Repairs and Maintenance	3400	
Other Services	318	
TOTAL SERVICES		6422
Machinery and Equipment	803	
Chemicals	841	
Utilities	5277	
Other Supplies and Equipment	1264	
TOTAL SUPPLIES AND EQUIPMENT		8185
TOTAL AQUISITION/CONSTRUCTION OF PHYSICAL ASSETS		
TOTAL TRANSFER PAYMENTS		
OTHER TRANSACTIONS		4583
GRAND TOTAL	GRAND TOTAL	\$ 45919

# PROCESS DATA FLOWS

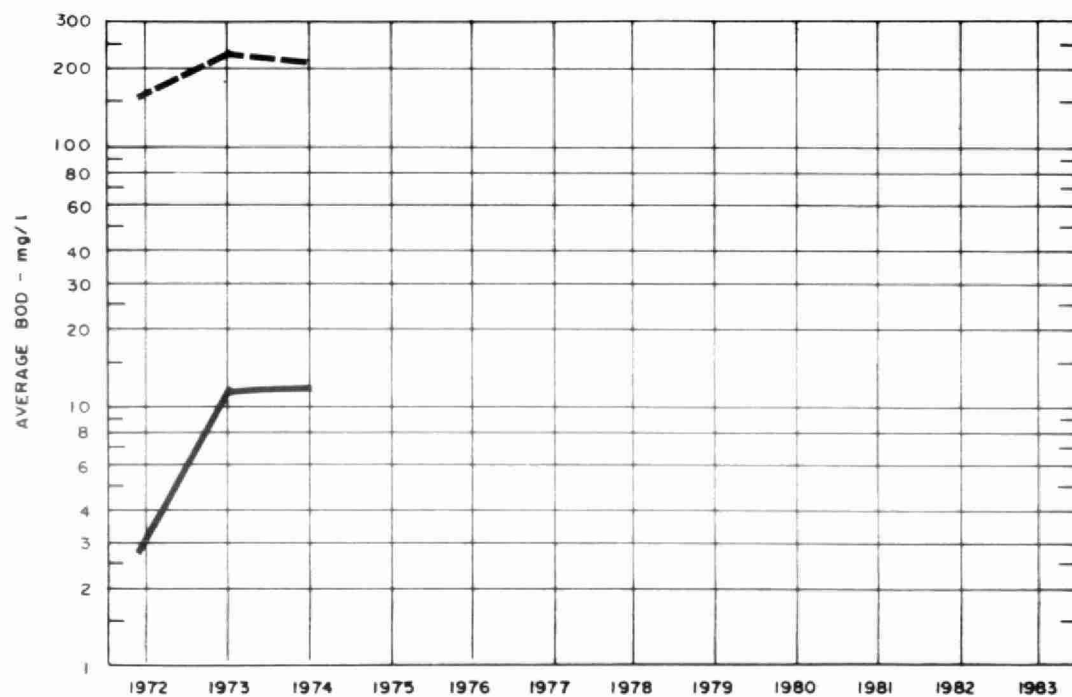
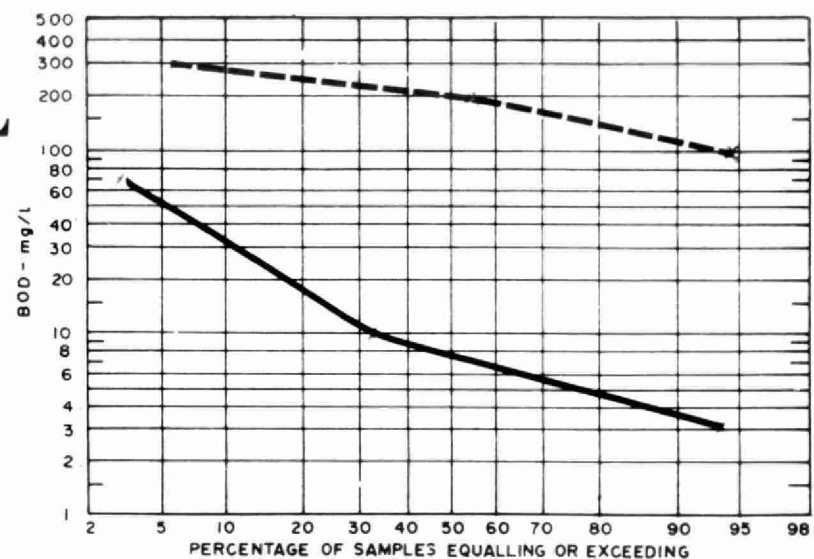


DESIGN CAPACITY - - - - -

# PLANT PERFORMANCE

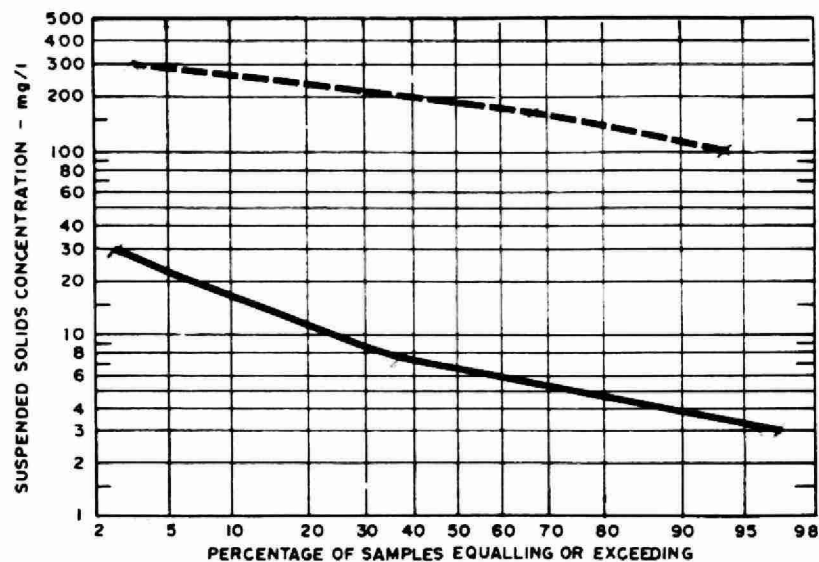
MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				PHOSPHORUS	
	TOTAL FLOW	AVERAGE DAY	MAXIMUM DAY	INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT
	million gallons	mil. gal	mgd	mg/l	mg/l	%	10 <sup>3</sup> pounds	mg/l	mg/l	%	10 <sup>3</sup> pounds	mg/l P	mg/l P
JAN	3.90	.13	.40	153	6	96	5.7	94	8	91	3.3	6.4	3.6
FEB	4.04	.14	.31	191	10	95	7.3	227	17	93	8.5	5.1	3.6
MAR	4.80	.15	.31	162	10	94	7.3	136	5	96	6.3	2.2	4.4
APR	5.03	.17	.30	221	13	94	10.5	170	10	94	8.0		
MAY	4.47	.14	.30	140	8	94	5.9	161	8	95	6.8		
JUNE	3.70	.12	.16	178	9	95	6.2	168	8	95	5.9	8.0	3.3
JULY	3.12	.10	.15	261	6	98	8.0	182	4	98	5.5		
AUG	2.71	.09	.14	207	6	97	5.4	310	8	98	8.2	11.2	5.5
SEPT	3.30	.11	.13	210	3	99	6.8	170	8	95	5.3	8.9	5.8
OCT	3.15	.10	.13	247	12	95	7.4	200	9	96	6.0		
NOV	3.73	.12	.18	240	32	87	7.8	190	9	95	6.7	6.2	3.6
DEC	4.28	.13	.20	208	14	93	8.3	167	8	95	6.8	4.5	2.1
TOTAL	46.33	-	-	-	-	-	88.0	-	-	-	78.7	-	-
AVG.	3.86	.13	MAXIMUM .40	201	11	95	7.3	179	9	95	6.6	6.6	4.0
No. of Samples	-	-	-	35	35	-	-	34	34	-	-	8	8

# BIOCHEMICAL OXYGEN DEMAND



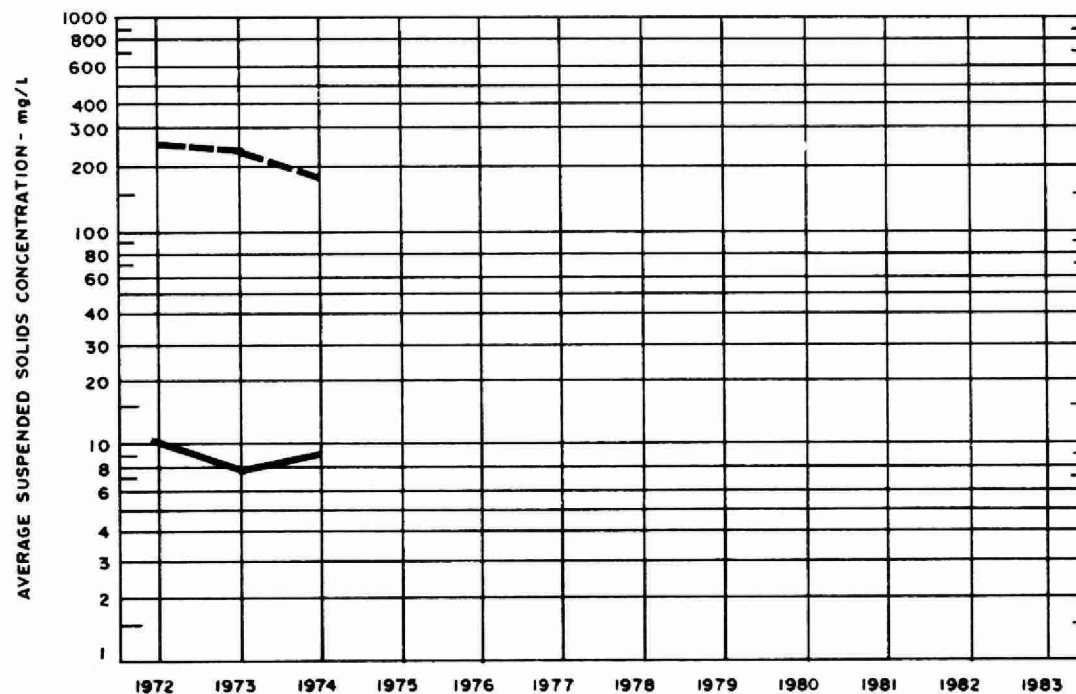
PLANT INFLUENT    - - - - -  
PLANT EFFLUENT    —————

# SUSPENDED SOLIDS

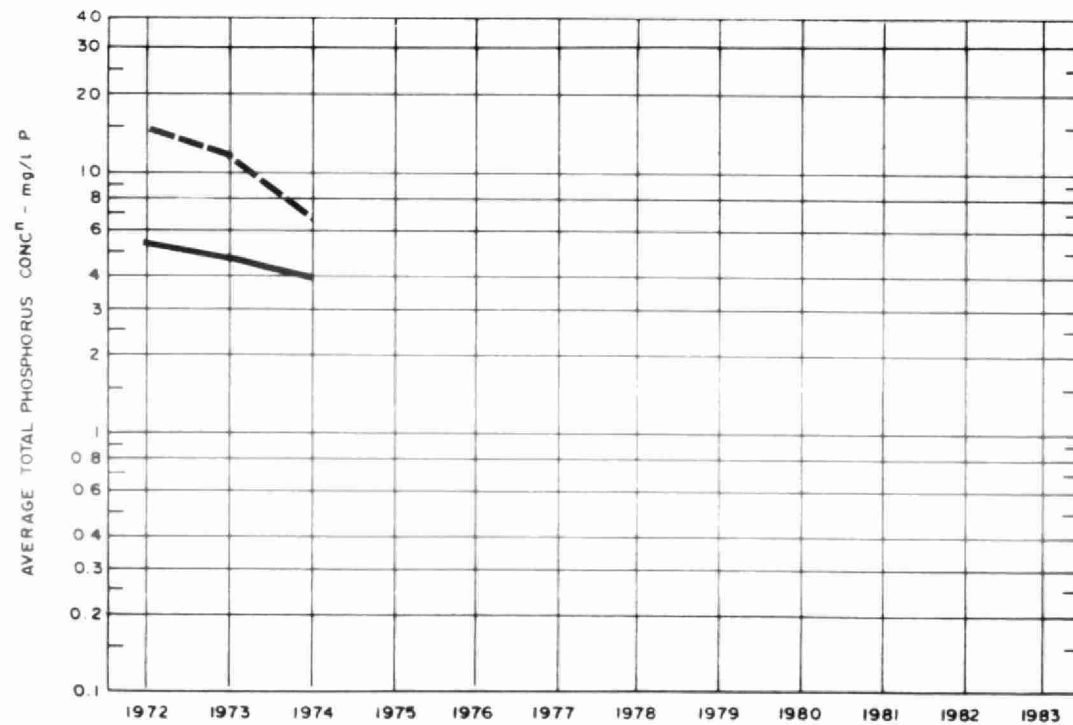
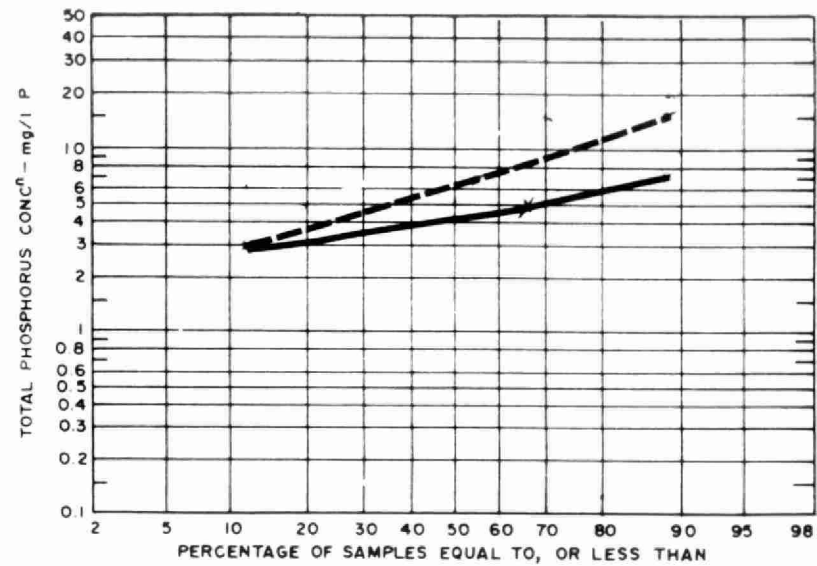


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# PHOSPHORUS



PLANT INFLUENT -----

PLANT EFFLUENT \_\_\_\_\_

## TREATMENT DATA

MONTH	GRIT	CHLORINATION		AERATION			WASTE SLUDGE			AEROBIC DIGESTER			
	QUANTITY REMOVED	Cl <sub>2</sub> USED	AVG. DOSAGE	MLSS CONC	F/M	AIR USED	QUANTITY	SUSPENDED SOLIDS	VOL. SOLIDS	QUANTITY REMOVED	SUSPENDED SOLIDS	VOL. SOLIDS	AMOUNT HAULED
	cubic feet	pounds	mg/L	mg/L	day <sup>-1</sup>	$\frac{1000 \text{ ft}}{\text{lb BOD}}$	10 <sup>5</sup> gallons	mg/l	%	10 <sup>5</sup> gallons	mg/l	%	cubic yards
JAN	8			5600	.02		.31			.20	34000		119
FEB	2			4800	.04		.28			.10	30000		59
MAR	8	60	2.9	5500	.03		.17			.05	35000	68	30
APR	3	60	3.7	6300	.04		.14						
MAY	8	140	3.3	4400	.03		.30			.12			71
JUNE	7	135	4.0	2900	.06		.13			.13	28000		77
JULY	7	155	5.0	2600	.05		.02			.18			107
AUG	9	155	5.7	4500	.03		.08	14000		.09			53
SEPT	8	5	5.2	11400	.04		.14				11000		
OCT	6			4200	.12		.12						
NOV	7			4800	.04		.03	18000					
DEC	9			5800	.04		.09						
TOTAL	82	710	-	-	-	-	1.81	-	-	.87	-	-	516
AVG.	1.8 cu. ft/mil gal		4.0	5200	.05		.15	16000			28000	68	

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